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states:(71) Applicant: **NIPPON STEEL CHEM CO LTD**(72) Inventor: **ONO HIDEKI  
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**(54) PREPARATION OF  
RUBBER-MODIFIED  
AROMATIC VINYL RESIN**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To provide a rubber-modified arom. vinyl resin which has an excellent transparency and a good balance between rigidity and strength by controlling the diameter of dispersed rubber particles as desired.

**SOLUTION:** A process for

continuously preparing a rubber-modified arom. vinyl resin by solution polymn. or bulk polymn. which comprises providing a starting soln. comprising a mixture of 100 pts.wt. monomer mixture soln. comprising 10 to 80wt% arom. vinyl monomer and 90 to 10wt% 1 or 2 C alkyl (meth)acrylate monomer with 2 to 30 pts.wt. rubber polymer and 2 to 100 pts.wt. solvent, prepolymerizing the starting soln. so that the conversion of the monomer to polymer is 10 to 50% and the diameter (d50) of the dispersed rubber particle after the inversion of the rubber phase is in the range of 0.2 to 10 $\mu$ m, passing the resultant prepolymer through a shear to apply a high shearing force of 200 to 40,000sec-1 to regulate the diameters of the dispersed rubber particles to 0.2 to 2.0 $\mu$ m, enhancing the conversion of the monomer to the polymer to at least 50wt.% in the subsequent reactor, and then removing volatile matter.

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